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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,852	02/28/2001	Mirosław Z. Bober	203250US2PCT	3498

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EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 01/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/763,852

Applicant(s)

BOBER, MIROSLAW Z.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 & 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

3. Claim 3 recites the limitation "the curve" in line 2. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, line 4 the limitation "smoothing parameter sigma" is not understood? Please clarify the language by replacing the limitation as "smoothing parameter (σ)".

Furthermore, claim 4 recites the limitation "resulting in a plurality of outline curves". It is unclear how a plurality of outline curves are generated from a single outline? Claim 13 also recites identical limitations. Please clarify.

5. Claim 4 recites the limitation "the maxima and minima" in line 5. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 5, lines 2-3 the limitation "arc length parameter" is not understood? Please clarify.

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7. Claim 6 recites the limitation "the peak height" in line 2. There is insufficient antecedent basis for this limitation in the claim.

8. Claims 7 and 9 recite the limitation "the greatest value and the smallest value" respectively. There is insufficient antecedent basis for these limitations in the claims.

9. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. While claim 10 recites the limitation "deriving a factor indicating the reliability of the representation using a relationship between at least two of said values ", the feature "factor" is uncertain what it supposes to represent. The only "factor" described in the entire specification is "confidence factor" not any factor per se. A similar limitation also occurs in claim 16. Please clarify.

10. Claim 11 recites the limitation "the ratio" in line 2. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 12 recites the limitation "the two greatest values" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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13. Claims 1, 2, 10, 14, and 17-21 are rejected under 35 U.S.C. 102(a) as being anticipated by de Queiroz, et al. (5,892,854).

With regard to claim 1, de Queiroz, et al. discloses a method of representing an object appearing in a still or video image, by processing signals corresponding to the image, the method comprising deriving a plurality of numerical values, i.e., binary moments, associated with features appearing on the outline, i.e., edge, of an object starting from an arbitrary point on the outline and applying a predetermined ordering, i.e., organizing a set of edge traces in the form of linked list, to said values to arrive at a representation of the outline (See for example, col. 8, lines 1-67; and col. 11, lines 30-40).

With regard to claim 2, wherein the predetermined ordering is such that the resulting representation is independent of the starting point on the outline (See for example, col. 8, lines 1-26).

Claim 10 is rejected the same as claim 10. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 10. Claim 10 distinguishes from claim 1 only in that it recites deriving a factor indicating the reliability of the representation using a relationship between at least two of said values, and this feature met by the reasons presented above in paragraph 9, and incorporated herein by reference.

With regard to claim 14, claims 1 and 10 encompass the limitation of this claim, and thus arguments analogous to those presented above for claims 1 and 10 are equally applicable to this claim.

Claim 17 is an analogous variation of claim 1, and thus is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 17.

Claim 18 is rejected the same as claim 1 except claim 18 is an apparatus claim. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 18.

Claim 19 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 19. As to the computer program (See for example, Fig. 2).

Claim 20 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 20. As to the computer system (See for example, Fig. 2).

Claim 21 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 21. As to the computer readable storage medium storing computer-executable process steps (See for example, Fig. 2).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over de Queiroz, et al. (5,892,854).

With regard to claim 15, de Queiroz, et al. (hereinafter "de Queiroz ») discloses all of the Claimed subject matter as already discussed above in paragraph 13, and is entirely incorporated herein by reference. de Queiroz does not explicitly call for ordering the values in decreasing

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size. Although de Queiroz does not explicitly call for ordering the values in decreasing size, it would have been an obvious matter of design choice to modify the linked-list used in de Queiroz to order/organize the binary moment values in decreasing size in the manner presented above for claim 8, since no new or unexpected results are seen to be attained by ordering the values in decreasing size.

16. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Queiroz, et al. (5,892,854) in view of Kinjo (5,881,171).

With regard to claim 15, de Queiroz, et al. (hereinafter “de Queiroz ») discloses all of the claimed subject matter as already discussed above in paragraph 13, and is entirely incorporated herein by reference. de Queiroz does not explicitly call for inputting a query, i.e., search, in the form of two-dimensional outline, deriving a descriptor of the outline, obtaining a descriptor of objects in stored images and comparing the query descriptor with each descriptor for a stored object, and selecting and displaying at least one result corresponding to an image containing an object for which the comparison indicates a degree of similarity (i.e., satisfied search condition in Kinjo) between the query and said object. However, Kinjo (See for example, Figs. 16 and 17) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Kinjo into the system of de Queiroz, and to do so would at least minimize the time taken for an object that is being sought.

Claim 16 is rejected the same as claims 10 and 15. Thus, arguments analogous to those presented above for claims 10 and 15 is equally applicable to claim 16.

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Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 5081689, 5119439, 5487116, 6014461, and 6182069; and European patent number: GB 2203877A; and a Publication to Hamano "A similarity retrieval method for image databases using simple graphics".

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


DANIEL MARIAM
PRIMARY EXAMINER

January 8, 2004